

ABSTRACT OF THE DISCLOSURE

A method of modulating the growth of a cell, such as a neoplastic or malignant cell from the colon, stomach, lung, brain, bone, esophagus, pancreas, breast, ovary or uterus includes contacting the cell with an agent for a time and under conditions sufficient to modulate the functional activity of sphingosine kinase in which down-regulation of the functional activity of the sphingosine kinase down-regulates growth of the cells and up-regulation of the functional activity of this sphingosine kinase up-regulates the growth of the cell. The down-regulation can reduce the functional activity of this sphingosine kinase to an oncogenic ineffective level. Agents useful in the invention include N,N-dimethylsphingosine and DL-threo-dihydrosphingosine.